

Energy Code Duct Tightness Verification

Pass/Fail

Date:

Permit No.:

Street Address:

Total conditioned floor area (sq. ft.):

Source of area and volume calculations:

Builder _____

Tester _____

Other _____

Tester:	
Signature:	
Builder:	
Builder Contact:	
HVAC Contractor:	

Post-construction test

☐ Total Leakage – 4.0 cfm/100 ft² maximum allowed

Testing result: _____ cfm/100 ft²

Rough-in test

Total leakage

Air Handler Installed?

☐ Yes – 4 cfm/100 ft² maximum allowed

☐ No – 3 cfm/100 ft² maximum allowed

Testing result: _____ cfm/100 ft²

Comments:

Results apply to the system as tested on the date above. Compliance is void if any changes are made to the duct system.



**Reading Town Hall
16 Lowell Street
Reading, MA 01867**

Building Department
Phone: (781) 942-6613
Fax: (781) 942-9071
Website: www.ci.reading.ma.us

Sheet Metal Permit

Date: _____

Permit # _____

Estimated Job Cost: \$ _____

Permit Fee: \$ _____

Plans Submitted: YES _____ NO _____

Plans Reviewed: YES _____ NO _____

Business License # _____

Applicant License # _____

Business Information:

Property Owner/Job Location Information

Name: _____

Name: _____

Street: _____

Street: _____

City/Town: _____

City/Town: _____

Telephone: _____

Telephone: _____

Photo I.D. required/Copy of Photo I.D. attached: YES _____ NO _____

Staff Initial _____

J-1/M-1 unrestricted license

J-2/M-2 restricted to dwellings 3-stories or less and commercial up to 10,000 sq. ft./2-stories or less

Residential: 1-2 Family _____ Multi-Family _____ Condo/Townhouses _____ Other _____

Commercial: Office _____ Retail _____ Industrial _____ Educational _____

Institutional _____ Other _____

Square Footage: under 10,000 sq. ft. _____ over 10,000 sq. ft. _____ Number of
Stories: _____

Sheet metal work to be completed: New Work: _____ Renovation: _____

HVAC _____ Metal Watershed Roof _____ Kitchen Exhaust System _____

Metal Chimney/Vents _____ Air Balancing _____

Provide detailed description of work to be done:

**MANUAL J AND MANUAL D
NEEDS TO BE SUBMITTED
WITH THIS APPLICATION**

INSURANCE COVERAGE:

I have a current liability insurance policy or its equivalent which meets the requirements of M.G.L. Ch. 112 Yes ☐ No ☐

If you have checked Yes, indicate the type of coverage by checking the appropriate box below:

A liability insurance policy ☐ Other type of indemnity ☐ Bond ☐

OWNER'S INSURANCE WAIVER: I am aware that the licensee does not have the insurance coverage required by Chapter 112 of the Massachusetts General Laws, and that my signature on this permit application waives this requirement.

Check One Only

Owner ☐ Agent ☐

Signature of Owner or Owner's Agent

By checking this box ☐, I hereby certify that all of the details and information I have submitted (or entered) regarding this application are true and accurate to the best of my knowledge and that all sheet metal work and installations performed under the permit issued for this application will be in compliance with all pertinent provision of the Massachusetts Building Code and Chapter 112 of the General Laws.

Duct inspection required prior to insulation installation: YES _____ NO _____

Progress Inspections

Date

Comments

_____	_____
_____	_____
_____	_____
_____	_____

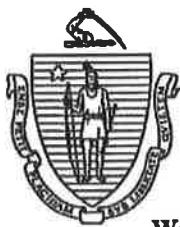
Final Inspection

Date

Comments

_____	_____
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By _____ Title _____ City/Town _____ Permit # _____ Fee \$ _____ Inspector Signature of Permit Approval _____	Type of License: <input type="checkbox"/> Master <input type="checkbox"/> Master-Restricted <input type="checkbox"/> Journeyperson <input type="checkbox"/> Journeyperson-Restricted <input type="checkbox"/> _____	_____ Signature of Licensee License Number: _____ Check at www.mass.gov/dpl
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The Commonwealth of Massachusetts
Department of Industrial Accidents
1 Congress Street, Suite 100
Boston, MA 02114-2017
www.mass.gov/dia

Workers' Compensation Insurance Affidavit: Builders/Contractors/Electricians/Plumbers.
TO BE FILED WITH THE PERMITTING AUTHORITY.

Applicant Information

Please Print Legibly

Name (Business/Organization/Individual): _____

Address: _____

City/State/Zip: _____ Phone #: _____

Are you an employer? Check the appropriate box:

1. ☐ I am an employer with _____ employees (full and/or part-time).*
2. ☐ I am a sole proprietor or partnership and have no employees working for me in any capacity. [No workers' comp. insurance required.]
3. ☐ I am a homeowner doing all work myself. [No workers' comp. insurance required.]†
4. ☐ I am a homeowner and will be hiring contractors to conduct all work on my property. I will ensure that all contractors either have workers' compensation insurance or are sole proprietors with no employees.
5. ☐ I am a general contractor and I have hired the sub-contractors listed on the attached sheet. These sub-contractors have employees and have workers' comp. insurance.‡
6. ☐ We are a corporation and its officers have exercised their right of exemption per MGL c. 152, §1(4), and we have no employees. [No workers' comp. insurance required.]

Type of project (required):

7. ☐ New construction
8. ☐ Remodeling
9. ☐ Demolition
10. ☐ Building addition
11. ☐ Electrical repairs or additions
12. ☐ Plumbing repairs or additions
13. ☐ Roof repairs
14. ☐ Other _____

*Any applicant that checks box #1 must also fill out the section below showing their workers' compensation policy information.

† Homeowners who submit this affidavit indicating they are doing all work and then hire outside contractors must submit a new affidavit indicating such.

‡ Contractors that check this box must attach an additional sheet showing the name of the sub-contractors and state whether or not those entities have employees. If the sub-contractors have employees, they must provide their workers' comp. policy number.

I am an employer that is providing workers' compensation insurance for my employees. Below is the policy and job site information.

Insurance Company Name: _____

Policy # or Self-ins. Lic. #: _____ Expiration Date: _____

Job Site Address: _____ City/State/Zip: _____

Attach a copy of the workers' compensation policy declaration page (showing the policy number and expiration date).

Failure to secure coverage as required under MGL c. 152, §25A is a criminal violation punishable by a fine up to \$1,500.00 and/or one-year imprisonment, as well as civil penalties in the form of a STOP WORK ORDER and a fine of up to \$250.00 a day against the violator. A copy of this statement may be forwarded to the Office of Investigations of the DIA for insurance coverage verification.

I do hereby certify under the pains and penalties of perjury that the information provided above is true and correct.

Signature: _____ Date: _____

Phone #: _____

Official use only. Do not write in this area, to be completed by city or town official.

City or Town: _____ Permit/License # _____

Issuing Authority (circle one):

1. Board of Health 2. Building Department 3. City/Town Clerk 4. Electrical Inspector 5. Plumbing Inspector
6. Other _____

Contact Person: _____ Phone #: _____

Information and Instructions

Massachusetts General Laws chapter 152 requires all employers to provide workers' compensation for their employees. Pursuant to this statute, an **employee** is defined as "...every person in the service of another under any contract of hire, express or implied, oral or written."

An **employer** is defined as "an individual, partnership, association, corporation or other legal entity, or any two or more of the foregoing engaged in a joint enterprise, and including the legal representatives of a deceased employer, or the receiver or trustee of an individual, partnership, association or other legal entity, employing employees. However the owner of a dwelling house having not more than three apartments and who resides therein, or the occupant of the dwelling house of another who employs persons to do maintenance, construction or repair work on such dwelling house or on the grounds or building appurtenant thereto shall not because of such employment be deemed to be an employer."

MGL chapter 152, §25C(6) also states that "every state or local licensing agency shall withhold the issuance or renewal of a license or permit to operate a business or to construct buildings in the commonwealth for any applicant who has not produced acceptable evidence of compliance with the insurance coverage required." Additionally, MGL chapter 152, §25C(7) states "Neither the commonwealth nor any of its political subdivisions shall enter into any contract for the performance of public work until acceptable evidence of compliance with the insurance requirements of this chapter have been presented to the contracting authority."

Applicants

Please fill out the workers' compensation affidavit completely, by checking the boxes that apply to your situation and, if necessary, supply sub-contractor(s) name(s), address(es) and phone number(s) along with their certificate(s) of insurance. Limited Liability Companies (LLC) or Limited Liability Partnerships (LLP) with no employees other than the members or partners, are not required to carry workers' compensation insurance. If an LLC or LLP does have employees, a policy is required. Be advised that this affidavit may be submitted to the Department of Industrial Accidents for confirmation of insurance coverage. **Also be sure to sign and date the affidavit.** The affidavit should be returned to the city or town that the application for the permit or license is being requested, not the Department of Industrial Accidents. Should you have any questions regarding the law or if you are required to obtain a workers' compensation policy, please call the Department at the number listed below. Self-insured companies should enter their self-insurance license number on the appropriate line.

City or Town Officials

Please be sure that the affidavit is complete and printed legibly. The Department has provided a space at the bottom of the affidavit for you to fill out in the event the Office of Investigations has to contact you regarding the applicant. Please be sure to fill in the permit/license number which will be used as a reference number. In addition, an applicant that must submit multiple permit/license applications in any given year, need only submit one affidavit indicating current policy information (if necessary) and under "Job Site Address" the applicant should write "all locations in _____ (city or town)." A copy of the affidavit that has been officially stamped or marked by the city or town may be provided to the applicant as proof that a valid affidavit is on file for future permits or licenses. A new affidavit must be filled out each year. Where a home owner or citizen is obtaining a license or permit not related to any business or commercial venture (i.e. a dog license or permit to burn leaves etc.) said person is NOT required to complete this affidavit.

The Department's address, telephone and fax number:

The Commonwealth of Massachusetts
Department of Industrial Accidents
1 Congress Street, Suite 100
Boston, MA 02114-2017

Tel. # 617-727-4900 ext. 7406 or 1-877-MASSAFE
Fax # 617-727-7749
www.mass.gov/dia

REScheck Systems Checklist

Requires
Brown Dr
R-49
R-15/19 Blau
4 CFM
3 CFM
mechanical

⌚ Ducts:

- 1 ☒ [403.2.1] Supply ducts in attics are insulated to $\geq R-8$. All other ducts in unconditioned spaces or outside the building envelope are insulated to $\geq R-8$.
- 2 ☒ [403.2.2] All joints and seams of air ducts, air handlers, and filter boxes are sealed.
- 3 ☒ [403.2.3] Building cavities are not used as ducts or plenums.
- 4 ☒ [403.2.2] Duct tightness test result of ≤ 4 cfm/100 ft² across the system or ≤ 3 cfm/100 ft² without air handler @ 25 Pa. For rough-in tests, verification may need to

⌚ Lighting:

- 1 ☒ [404.1] 75% of lamps in permanent fixtures or 75% of permanent fixtures have high efficacy lamps. Does not apply to low-voltage lighting.
- 2 ☒ [404.1.1] Fuel gas lighting systems have no continuous pilot light.

⌚ Mechanical and Water Heating:

- 1 ☒ [403.2.2.1] Air handler leakage designated by manufacturer at $\leq 2\%$ of design air flow.
- 2 ☒ [403.1.1] Programmable thermostats installed on forced air furnaces.
- 3 ☒ [403.1.2] Heat pump thermostat installed on heat pumps.
- 4 ☒ [403.4.1] Circulating service hot water systems have automatic or accessible manual controls.
- 5 ☒ [403.5.1] All mechanical ventilation system fans not part of tested and listed HVAC equipment meet efficacy and air flow limits.
- 6 ☒ [303.3] Manufacturer manuals for mechanical and water heating systems have been provided.

⌚ Plan Review:

- 1 ☒ [103.1 103.2, 403.7] Construction drawings and documentation demonstrate energy code compliance for lighting and mechanical systems. Systems serving multiple
- 2 ☒ [302.1, 403.6] Heating and cooling equipment is sized per ACCA Manual S based on loads calculated per ACCA Manual J or other methods approved by the code official.






⌚ Systems:

- 1 ☒ [403.8] Snow- and ice-melting system controls installed.
- 2 ☒ [403.3] HVAC piping conveying fluids above 105 °F or chilled fluids below 55 °F are insulated to $\geq R-3$.
- 3 ☒ [403.3.1] Protection of insulation on HVAC piping.
- 4 ☒ [403.4.2] Hot water pipes are insulated to $\geq R-3$.


REScheck Envelope Checklist

The REScheck software will generate helpful Checklists that list applicable requirements.








Air Leakage:

- 1  [402.4.1.1] Air barrier and thermal barrier installed per manufacturer's instructions.
- 2  [402.4.3] Fenestration that is not site built is listed and labeled as meeting AAMA /WDMA/CSA 101/I.S.2/A440 or has infiltration rates per NFRC 400 that do not exceed
- 3  [402.4.4] IC-rated recessed lighting fixtures sealed at housing/interior finish and labeled to indicate ≤ 2.0 cfm leakage at 75 Pa.
- 4  [403.5] Automatic or gravity dampers are installed on all outdoor air intakes and exhausts.
- 5  [402.4.1.2] Blower door test @ 50 Pa. ≤ 5 ach in Climate Zones 1-2, and ≤ 3 ach in Climate Zones 3-8.

Fenestration:

- 1  [303.1.3] U-factors of fenestration products are determined in accordance with the NFRC test procedure or taken from the default table.

Insulation:

- 1  [303.2.1] A protective covering is installed to protect exposed exterior insulation and extends a minimum of 6 in. below grade.
- 2  [303.1] All installed insulation is labeled or the installed R-values provided.
- 3  [303.2, 402.2.7] Floor insulation installed per manufacturer's instructions, and in substantial contact with the underside of the subfloor.
- 4  [303.2] Wall insulation is installed per manufacturer's instructions.
- 5  [303.1.1.1, 303.2] Ceiling insulation installed per manufacturer's instructions. Blown insulation marked every 300 ft².
- 6  [402.2.3] Vented attics with air permeable insulation include baffle adjacent to soffit and eave vents that extends over insulation.
- 7  [402.2.4] Attic access hatch and door insulation \geq R-value of the adjacent assembly.

Plan Review:

- 1  [103.1, 103.2] Construction drawings and documentation demonstrate energy code compliance for the building envelope.

Post Construction:

- 1  [401.3] Compliance certificate posted.

2012 International Energy Conservation Code – Mandatory Requirements

401.3	Certificate
402.4	Air leakage
402.4.1	Building thermal envelope
402.4.1.1	Installation
402.4.1.2	Testing
402.4.2	Fireplaces
402.4.3	Fenestration air leakage
402.4.4	Recessed lighting
402.5	Maximum fenestration U and SHGC
403.1	Controls
403.1.2	Heat pump supplementary heat
403.2	Ducts
403.2.2	Duct sealing
403.2.3	Building cavities
403.3	Mechanical system piping insulation
403.4	Service hot water systems
403.4.1	Circulating hot water systems
403.5	Mechanical ventilation
403.6	Equipment Sizing (Manual J and S)
403.7	Systems serving multiple dwelling units
403.8	Snow melt system controls
403.9	Pools and in-ground permanently installed spas
404.1	Lighting equipment
404.1.1	Fuel gas lighting systems